

# Mobilna mašinska obrada HONOVANJE



# Set za honovanje





# Alat za honovanje otvora $\varnothing$ 44 – 50 mm





# Alat za honovanje otvora $\varnothing$ 50 – 66 mm





# Alat za honovanje otvora $\varnothing$ 64 – 104 mm



# Ugaona bušilica za honovanje



**OPTIMA**  
POWER



# Granulacije brusnog kamena za honovanje

gruba obrada: 70 / 150 / 280; fina obrada: 400



# Dijamantski alati za honovanje





# Trokraki mikrometri za mjerenje i kontrolu otvora u toku honovanja





# Subitor za kontrolu otvora





# Tehnološki postupak honovanja

Honing tools for expansion sleeve coupling

Honing tool										Wear parts		
Coupling size	Honing foot without stones	Honing unit (honing tool + BBC-cardan joint)	Mandrel driver comp. with BBC-cardan joint	Connection	Measuring instrument	Adjusting device for measuring instrument	Honing device	Honing range # min. - # max.	Honing stones	Guide shoes	Honing oil	
315		P1 HTGF 113 253 R 3.4						44 - 51	P20 S18-A-47			
355		P2 HTGF 113 253 R 4						51 - 66	P21 T20-A-47			
400		P3 HTGF 113 253 R 4						51 - 66	P22 V24-A-47			
425	P4	ZJ-P28-2625 SC						66,2 - 69,8				
450	P5	ZJ-P28-2750 SC						69,5 - 73,0				
475	P6	ZJ-P28-2875 SC						72,5 - 76,2				
500	P7	ZJ-P28-3125 SD						78,9 - 82,5				
530	P8	ZJ-P28-3250 SC						82,0 - 85,7				
560	P9	ZJ-P28-3500 SD						88,2 - 92,0				
600	P10	3J-P28-3625 SD						91,5 - 95,2				
630	P11	3J-P28-3675 SD						97,9 - 102,0				
670	P12	3J-P28-4125 SD						110,6 - 114,3				
710	P13	3J-P28-4375 SD						116,9 - 120,6				
750	P14	3J-P28-4625 SD						123,3 - 127,0				
800	P15	3J-P28-4875 SD						129,6 - 133,4				
850	P16	3J-P28-5125 SD						139,4 - 142,9				
900	P17	3J-P28-5500 SD						75,7 - 79,4				
8.)	P502J	P28-3000 SC						94,7 - 98,5				
8.)	P51J	P28-3750 SD						104 - 108				
8.)	P52J	P28-4000 SD						123,3 - 130,5				
8.)	P53J	P28-5000 SD						88,4 - 92,0				
8.)	P54J	P28-3500 SD										

**Remarks (referring to table)**

- HT80 229 423
- BBC-cardan joint replaces original joint
- Honing stones... are supplied in packages of 2 stones and 2 guide shoes
- Honing stones... are supplied in packages of 12 stones; the guide shoes have to be procured separately
- Designation as per SUNNEN range of products
- Wear parts... see six parts list for quantity
- Order P2 and P3 only once
- For modification from friction and shear sleeve couplings to expand expansion sleeve couplings

**Supplier**

(Honing tools and measuring instrument, messrs. SUNNEN, USA, designations as per SUNNEN range of products)

Werkzeugmaschinen AG  
Perfection  
Madelhofstr. 108  
2503 Bial  
Tel. 032/25 34 44

Hommel Handel GmbH  
5000 Koeln 71 - Pesch

**Arrangement of honing stones**

Example of foot chest  
A) for lress 1-3  
1 honing unit  
1 connection  
Honing stones

**Honing unit, complete**

2 Honing stones per honing tool  
2 Guide shoes

**Steinauswahltable für tragbares Hongerät SN-75**

Hon-durchmesser	Bearbeitung	A Halter	B Körnung			C Härte			
			Vorhonen	Polieren		weich	mittel	hart	
44 bis 50	zum Vorhonen von Stahl	S 18-A	70	150	280	400			
	zum Vorhonen aller anderen Werkstoffe	S 18-J	4	6			3	5	7
	zum Polieren sämtlicher Werkstoffe	S 18-J	1	4	6			3	5

**Steinauswahltable für tragbares Hongerät JN-95**

Hon-durchmesser	Bearbeitung	A Halter	B Körnung			C Härte			
			Vorhonen	Polieren		weich	mittel	hart	
50 bis 56	zum Vorhonen von Stahl	T 20-A	70	150	280	400			
	zum Vorhonen aller anderen Werkstoffe	T 20-J	4	6			3	5	7
	zum Polieren sämtlicher Werkstoffe	T 20-J	1	4	6			3	5

**Steinauswahltable für AN-12**

Hon-durchmesser	Bearbeitung	A Halter	B Körnung			C Härte			
			Vorhonen	Polieren		weich	mittel	hart	
64 bis 69	zum Vorhonen von Stahl	G 25-A	70	150	280	400			
	zum Vorhonen aller anderen Werkstoffe	G 25-J	4	6			3	5	7
	zum Polieren sämtlicher Werkstoffe	G 25-J	1	4	6			3	5

**Steinauswahltable für AN-12**

Hon-durchmesser	Bearbeitung	A Halter	B Körnung			C Härte			
			Vorhonen	Polieren		weich	mittel	hart	
69 bis 108	zum Vorhonen von Stahl	M 27-A	70	150	280	400			
	zum Vorhonen aller anderen Werkstoffe	M 27-J	4	6			3	5	7
	zum Polieren sämtlicher Werkstoffe	M 27-J	1	4	6			3	5

**Steinauswahltable für AN-12**

Hon-durchmesser	Bearbeitung	A Halter	B Körnung			C Härte			
			Vorhonen	Polieren		weich	mittel	hart	
89 bis 140	zum Vorhonen von Stahl	N 37-A	70	150	280	400			
	zum Vorhonen aller anderen Werkstoffe	N 37-J	4	6			3	5	7
	zum Polieren sämtlicher Werkstoffe	N 37-J	1	4	6			3	5

**Steinauswahltable für AN-12**

Hon-durchmesser	Bearbeitung	A Halter	B Körnung			C Härte			
			Vorhonen	Polieren		weich	mittel	hart	
104 bis 533	zum Vorhonen von Stahl	W 47-A	70	150	280	400			
	zum Vorhonen aller anderen Werkstoffe	W 47-J	4	6			3	5	7
	zum Polieren sämtlicher Werkstoffe	W 47-J	1	4	6			3	5




# Izvođenje radova





# Reference



February 22<sup>nd</sup> 2019

Optima Power d.o.o.  
Hajduk Veljka 26  
74480 Modrica  
Bosnia and Hercegovina

Our Ref. ESO-007249

Contract No. PO 4000027406


**Milestone Protocol - Project completion**  
Project "Nikola Tesla A4 - Retrofit"


We hereby confirm that project under the contract PO 4000027406 is completed.

Project completion is confirmed for the ordered scope:

- Site coordination, Site Management, EHS, Site infrastructure, Risk assessment, Controlling, Turbine engineers, Installation works, mobile machining, Turbine spare parts, machining of bearing pedestal and bearings #1; #2; #3, Installation of impulse piping/system, cabling installation on TCC and measuring equipment, machining of LP casing, Machining of sleeve for coupling LP -GEN;
- PAC protocol signed on 3th Dec 2018


Taking into account the above mentioned scope GE confirm the successful performance of the ordered scope according to the GE rules, standards and process.

Project Management:   
Dalibor Nikolic  
Project Manager  
GE Power GmbH

Procurement Manager:   
Jens Schmidt  
Procurement Manager  
GE Power GmbH

**GE Power GmbH**  
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GE Power  
Power Services

**Acceptance Certificate**

between

GE Power AG, Boveristraße 22, 68309 Mannheim, Germany  
- hereinafter „Customer“ -

and

Optima Power d.o.o., Hajduk Veljka 26, 74480 Modrica, BiH  
- hereinafter „Contractor“ -

Customer and Contractor met 13.01.2017 at TE Nikola Tesla B to witness that Contractor's works fulfilled under the Turbine contract no. 4000017347/2 and Generator contract no. 4000019287/2 comply with all contractual requirements, including but not limited to the technical specification for follow scope of supply:  
Site Management, EHS, Supervision of turbine overhaul, Fitter for blade replacement, Generator winder, Electrical fitter, IsC installation on Generator, Mobile machining, NDT, Supply of parts, Supply of special tools, Supply of material, Special transports, Generator stator reworks,

Participants:

For the Customer:	For the Contractor:
1. Dalibor Nikolic	1. Milan Stankovic
2. Djordje Tesic	2. Davor Karalic
3.	3.
4.	4.

1. Take over

includes all of Contractor's works

is limited to the following parts of Contractor's works: \_\_\_\_\_

**VERTRAULICHES DOKUMENT**  
Jegliche Offenlegung, Vervielfältigung, Übersetzung oder Bearbeitung  
ohne ausdrückliche Genehmigung von GE Power ist untersagt.

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